

CITY OF BEAVERTON

Engineering Technician 3

General Summary

Perform advanced responsible work as a highly experienced technician in the field of civil engineering technology. Survey, draft, design or inspect improvement projects. Perform precision geographic information collection and recording of utility asset, and other pertinent, information from a variety of traceable sources. Act as lead over lower-level Engineering Technicians.

Key Distinguishing Duty

Serve as a lead technician to lower level technicians including the following: work assignments; conducting the performance discussions and developing the performance appraisals for assigned employees.

Essential Functions

Depending upon assignment, the incumbent may perform a combination of some or all of the following duties, which are a representative sample of the level of work appropriate to this class.

1. Serve in a lead role for a program or project team. Evaluate performance and program effectiveness and recommend action for improvement as necessary. Prepare reports.
2. Assign, schedule and review lower-level engineering technician work. Provide coaching to employees and provide input into performance evaluations. Participate in the selection process.
3. Provide technical assistance to City staff, including interpreting City code and ordinances, reviewing building permits for conflicts with the public infrastructure and research various projects.
4. Provide technical support to the public at the front counter regarding engineering and/or mapping issues via fax, email or telephone.
5. Assist with the review and propose revisions to update City engineering standards.
6. Perform computer aided design and drafting (CADD) for projects being designed by the engineering department and maintain City drafting standards.
7. Conduct construction inspection on City engineering projects to ensure compliance with plans and standards. Review pay estimate requests submitted by contractors for accuracy.
8. Calculate construction project cost estimates for projects designed by engineering staff and prepare related contract specifications.

9. Conduct research on capital improvement project issues. Conduct field surveys for determination of right-of-way and location of topographical data, existing infrastructure, utilities and other ground surface features.
10. Coordinate with general and sub-contractors for provisions of horizontal and vertical layout, transportation and utility improvements.
11. Prepare legal surveys for filing in compliance with statute and administrative rules, under the direction of a registered land surveyor. Create record drawing in compliance with the Washington County Surveyors Office.
12. Manage the sign system, including conducting traffic surveys and developing as-built plans in CADD format. Maintain and operate central signal system database. Perform analysis of traffic data for the development of timing plans.
13. Conduct traffic-related field surveys and analyze data. Develop and install scheduled timing plans for all traffic signals maintained by the City. Review and recommend approval of plans for new traffic signals, streets and traffic calming projects. Participate in the design of new streets, signals or related modifications.
14. Improve and maintain engineering level accuracy and reliability of applicable utility asset mapping layers for historic and newly constructed as built information using the best available and cost effective technology. Maintain original record documents of these sources.
15. Coordinate with other departments to meet mandated requirements and to maintain standardized layer functions throughout the City.
16. Identify, procure and/or assist in the transfer and validation of utility asset digital data from other agencies and consultants.
17. Perform work of Engineering Technician II as assigned.
18. Exhibit leadership to work teams and fellow employees. Serve as a model for accomplishing City's vision and goals. Create an environment in which employees are focused on producing excellent quality results.
19. Model and coach employees on excellence in internal and external customer service. Promote professional and courteous behavior with a creative approach to problem resolution that creates a positive experience for the customer.
20. Represent the division and/or City to the public, in legal or administrative proceedings, to other organizations or entities and in other situations as required. Provide leadership in emergency situations. Make presentations and provide comment and testimony. Advance and protect the interests of the City and its citizens in all matters.
21. Actively support safety and loss control measures. Ensure employees are held to departmental safety and loss control standards.

22. Develop safe work habits and follow all required safety policies, procedures and techniques. Contribute to safety of self, co-workers and the general public.
23. Follow standards as outlined in the Employee Handbook.
24. Produce an acceptable quantity and quality of work that is completed within established timelines.
25. Participate in the City Emergency Management program including classes, training sessions and emergency events.
26. Actively promote and support diversity in the workplace through staffing, promotions, training and career development. Model respect for diversity in the workplace.

Other Functions

1. Perform related duties of a similar scope and nature.

Knowledge Required

- ◆ Advanced knowledge of safety practices related to engineering construction inspection including confined space entry, underground excavation shoring and traffic control.
- ◆ Working knowledge of practices, principles, techniques, equipment and instruments used in civil engineering technology, and engineering construction inspection surveying.
- ◆ Working knowledge of engineering design practices.
- ◆ Advanced knowledge of computer aided design and drafting programs.
- ◆ Working knowledge of the tools, methods and materials used in the construction trade including those used for utilities, roads, water testing/installation, collection and street systems.
- ◆ Working knowledge of issues and trends in the construction industry.
- ◆ Working knowledge of the federal, state, and local standards, codes, ordinances, laws and regulations governing civil engineering, construction and inspection.
- ◆ Basic knowledge of practices and principles of public/business administration practices and decision-making.
- ◆ Basic knowledge of strategic planning methods with an emphasis on services related to civil engineering, construction and/or inspection.
- ◆ Working knowledge of public purchasing and contracting laws and regulations.
- ◆ Basic knowledge of human resources management practices.
- ◆ Working knowledge of mathematics principles related to engineering.
- ◆ Working knowledge of English grammar, spelling and usage.

For asset management function the following are required in addition to those listed above:

- ◆ Working knowledge of coordinate geometry and mathematics principles related to mapping.
- ◆ Working knowledge of GIS applications, programming languages and development tools including ESRI, ArcView, GPS and asset management software.
- ◆ Working knowledge of principles and practices of cartography.
- ◆ Working knowledge of operational uses of map printing (or output) devices and the standard reproduction processes for maps or drawings.

Skills/Abilities Required

- ◆ Advanced ability to read and interpret maps, plans and specifications.
- ◆ Advanced ability to perform engineering computations.
- ◆ Advanced ability to prepare engineering plans and specifications.
- ◆ Advanced ability to apply and interpret codes and ordinances, research deeds and survey records.
- ◆ Ability to productively lead and/or participate on a team and in a team environment including the ability to develop a team approach to producing high quality results.
- ◆ Ability to effectively lead a staff including training, coaching, scheduling and reviewing work.
- ◆ Strong ability to demonstrate leadership behavior to employees, contractors, public officials, other agencies, customers and the general public.
- ◆ Strong ability to establish and maintain effective working relationships with employees, contractors, other agencies, public officials and the general public.
- ◆ Strong ability to apply and to coach employees on excellent internal and external customer service skills.
- ◆ Strong ability to communicate effectively both orally and in writing with diverse customers, employees, contractors, other agencies, public officials and the general public. Ability to make presentations and develop reports that include technical information.
- ◆ Advanced ability to use word processing, spreadsheet programs, computer aided drafting and design tools or other application software as required for position.

Minimum Qualifications Required for Entry

Associate's degree in civil engineering technology or surveying and 5 years experience in engineering or a related field or an equivalent combination of education and experience enabling the incumbent to perform the essential functions of the position.

Additional Minimum Qualifications Required for Asset Management Function Assignment

Two years using GIS applications, programming languages and development tools and asset management software.

Licensing/Special Requirements

- ◆ Positions in this classification are required to possess a valid driver's license and the ability to meet the City's driving standards.

Working Conditions

Regular focus on a computer screen; daily precise control of fingers and hand movements; daily standing for prolonged periods; occasional lifting between 20 and 50 pounds; crouching, crawling, bending, kneeling, climbing or balancing; exposure to high noise levels; weekly dealing with distraught or difficult individuals; occasional attendance at meetings or activities outside of normal working hours; occasional response to emergency conditions off-hours; occasional operation of a motor vehicle on public roads.

Classification History

As of 10/97: Engineering Technician III

Revised: 1/98

New class specification title 1/98: Engineering Technician 3

Revised: 3/05

Revised: 1/1/09

Status: SEIU

FLSA: Non-exempt

Department Head Signature

Human Resources Signature

Date

Date